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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
KESSLER, CHRISTOPHER S	
ART UNIT	**PAPER NUMBER**
1793	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/688,890	IYODA ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER KESSLER	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18-53* is/are pending in the application.

4a) Of the above claim(s) *1-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-16 and 18-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/07/08; 5/30/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Responsive to the amendment filed 25 February 2008, claims 10, 11, 18, 19, 28, 29, 32, and 33 are amended and claims 34-53 are added. Claims 10-16 and 18-53 are currently under examination.

Status of Previous Rejections

2. Responsive to the amendment filed 25 February 2008 and the IDS filed 30 May 2008, new grounds for rejection are presented in this action. The rejections under 35 USC 112 are withdrawn.

Information Disclosure Statement

3. Documents not available in English have not been considered, and have been crossed off the IDS.

Examiner's Interpretation

4. The examiner interprets the term "the resin powder is applied by the thermal treatment" in claim 10 and throughout the claims to mean that the resin is put into effect or put to use, or laid on and spread. Merriam Webster's definition of the word "apply" is provided with this Office action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10-12, 15, 16 and 18-53 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,754,936 issued to Jansson (hereinafter "Jansson").

Regarding claim 10, the examiner notes that the claim is written in product-by-process format. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). Applicant is further directed to MPEP 2113.

Jansson teaches the claimed invention. Jansson teaches iron powder components containing thermoplastic resin (see Title, Abstract). Jansson teaches that a soft magnetic green compact is manufactured comprising a magnetic iron system powder and a mixed powder including a resin powder (see cols. 2-3, EXAMPLES 1-3).

Regarding the limitations of the process steps, Jansson teaches an essentially identical process (see cols. 2-3, EXAMPLES 1-3). Jansson teaches that the compact is formed by compressively molding the magnetic powder and the mixed powder

containing resin and applying a thermal treatment comprising heating in an oxidizing atmosphere (see cols. 2-3, EXAMPLES 1-3). Jansson teaches that the resin powder is present in an amount of 0.5% prior to the heat treatment (see EXAMPLE 1). Jannson does not teach what is the amount of the thermoplastic resin after heat treatment. However, because Jansson teaches an essentially identical process, this property would have been inherent in the green compact of Jansson. Applicant is further directed to MPEP 2112.01.

Regarding the limitation wherein the resin powder has a lubrication function and a binding function, that property would have been inherent in the resin powder of Jansson, since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01. Regarding the limitation wherein the resin powder is applied by the thermal treatment, Jannson teaches that the compact is heated such that the resin is cured (see col. 1, EXAMPLES 1-3), thus meeting the limitation of "applied." Regarding the limitation wherein the particles of the magnetic powder are directly bonded together by oxidation caused by the thermal treatment, Jansson does not teach this feature. However, that property would have been inherent in the resin powder of Jansson, since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Regarding claim 11, Jansson further teaches that the iron system powder comprises a phosphated iron system powder. The property of insulation coatings of the magnetic powder bound together thus would have been inherent in the green compact

of Jansson, since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Regarding claim 12, Jansson further teaches wherein the resin powder includes a polyamide resin (see col. 2, EXAMPLE 1 and claims 1-5). Jansson further teaches that the particle size of the thermoplastic resin is less than 200 μm (see claim 5), defining the range claimed with sufficient specificity to anticipate that range. Applicant is further directed to MPEP 2131.03.

Regarding claim 15, Jansson teaches wherein the heat treatment takes place at a temperature of 300 ˚C in air (see EXAMPLES 1-3), falling within the temperature range as claimed, anticipating said range, and meeting the limitation of "oxidizing ambient." Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Regarding claim 16, Jansson teaches examples of green compacts having density values within the range as claimed (see EXAMPLES 1-3).

Regarding claim 18, Jansson is applied to the claim as stated above. Regarding the limitation wherein the particles of the magnetic powder are directly bonded together by oxidation, Jansson does not teach this feature. However, that property would have been inherent in the resin powder of Jansson, since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Regarding claim 19, Jansson is applied to the claim as stated above. Jansson further teaches that the iron system powder comprises a phosphated iron system

powder. The property of insulation coatings of the magnetic powder bound together thus would have been inherent in the green compact of Jansson, since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Regarding claim 20, Jansson teaches wherein the heat treatment takes place at a temperature of 300 ˚C in air (see EXAMPLES 1-3), falling within the temperature range as claimed, anticipating said range, and meeting the limitation of "oxidizing ambient." Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Regarding claim 21, Jansson teaches wherein the heat treatment takes place at a temperature of 300 ˚C in air (see EXAMPLES 1-3), falling within the temperature range as claimed, anticipating said range, and meeting the limitation of "oxidizing ambient." Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Regarding claim 22, Jansson teaches wherein the iron powder includes a phosphated iron powder (see EXAMPLES 1-3). Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Regarding claim 23, Jansson is applied to the claim as stated above. Jansson further teaches that the iron system powder comprises a phosphated iron system powder. The property of insulation coatings of the magnetic powder bound together thus would have been inherent in the green compact of Jansson, since an essentially

identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Regarding claim 24, Jansson teaches several examples in which the amount of resin before molding is within the range as claimed (see EXAMPLES 1-3), thus anticipating said range. Applicant is further directed to MPEP 2131.03.

Regarding claim 25, Jansson teaches several examples in which the amount of resin before molding is within the range as claimed (see EXAMPLES 1-3), thus anticipating said range. Applicant is further directed to MPEP 2131.03.

Regarding claim 26, Jansson teaches wherein the iron powder includes a phosphated iron powder (see EXAMPLES 1-3).

Regarding claim 27, Jansson teaches wherein the iron powder includes a phosphated iron powder (see EXAMPLES 1-3).

Regarding claim 28, Jansson is applied to the claim as stated above. Jansson does not explicitly teach wherein the insulation coating covers the iron system powder so that there is no mixed powder between the iron system powder and the insulation coating. However, Jansson teaches wherein the powder is phosphated by aqueous phosphoric acid treatment (see EXAMPLES 1-3), and that the powder particles are coated “as completely as possible” (see col. 2, lines 4-14). Thus the powder would inherently be totally coated, because Jansson teaches that the particles should be coated "as completely as possible" (see col. 2).

Regarding claim 29-33, Jansson is applied to the claims as stated above.

Regarding claim 34-43, Jansson teaches wherein the green compact comprising the powder is heated (and therefore cured) after compressive molding (see EXAMPLES 1-3). Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Regarding claims 44-53, Jansson teaches wherein the green compact is heated at a temperature of 300 ˚C (see EXAMPLES 1-3). This treatment would inherently result in increasing adhesiveness relative to the iron system powder since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

7. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Jansson, as evidenced by San Diego Plastics, Ultem polytherimide (web page accessed 2 July 2008) [available: http://www.sdplastics.com/ultem.html], hereinafter "Ultem Data Sheet."

Regarding claim 13, Jansson is applied to the claim as stated in the rejection of claim 10. Jansson further teaches an example in which the iron system powder is mixed with Ultem resin powder and a polyamide powder (Orgasol) (see EXAMPLE 2). The Ultem powder inherently has a melting temperature of greater than 200 ˚C (see Ultem Data Sheet). Thus, the green compact of Jansson would have the same structure and properties as the claimed green compact.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 14 is rejected under 35 USC 103 (a) as being unpatentable over Jansson and Ultem Data Sheet as applied to claim 13 above and further in view of Hayashi.

Regarding claim 14, Jansson does not teach wherein the resin includes a polyphenylene sulfide. Jansson teaches that the resin may include several polymers including a polyphenylene ether and/or a polyamide based resin (see col. 2).

Hayashi teaches a resin bonded magnet (see Abstract). Hayashi teaches that several different resins may be used, such as polyamide resins or polyphenylene sulfide resins, as are known in the art (see PRIOR ART). Thus, it would have been obvious to one of ordinary skill in the art at time of invention to have replaced some or all of the

resin taught by Jansson with a polyphenylene sulfide resin, because Hayashi teaches that these are known functional equivalents in the art (see col. 1). Applicant is further directed to MPEP 2144.06.

10. Claims 10-16, and 18-53 are rejected under 35 USC 103 (a) as being unpatentable over Hayashi et al. in view of Kawato et al., taken in view of Lefebvre ('729).

Regarding Claim 10, the examiner notes that the claim is written in product-by-process format. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). Applicant is further directed to MPEP 2113.

Hayashi et al. teaches a soft magnetic green compact made from an iron containing powder (col. 2, line 44) and a resin binder powder (col. 7, lines 13-22). The examiner notes that the function of the resin powder taught by Hayashi would inherently possess the claimed property. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

However, Hayashi et al. is silent with regard to compression molding or heat treatment steps, and does not disclose amounts of binder in the range of 0.01-0.50 weight percent after molding.

With regard to the processing steps and binder amounts of Claim 10, Kawato et al. teaches to use less binder when using a compression molding technique than an injection technique, using binder in amounts of 0.1 to 5% when using compression molding (col. 7, lines 55-62), which thus would result in final binder amounts within the range as claimed by Applicant. Kawato further teaches that the advantages of using compression molding include excellent physical properties (see cols. 12-14).

It would have been obvious to one skilled in the art at the time invention was made to use the compression molding and binder range disclosed in Kawato et al., in making the soft magnetic green compact of Hayashi et al. in order to make a magnet with excellent physical properties, as taught by Kawato (see cols. 12-14).

However, neither Hayashi et al. nor Kawato et al. teach a heat treatment in oxidizing ambient to oxidation bond iron powder as claimed. The claims 10-16 and 18-25 are product-by-process claims. It is noted that applicants have disclosed in the specification that the claimed processing limitation of oxidation bonding led to different properties in the product claimed.

Lefebvre ('729) discloses that in a soft magnetic green compact, the oxidation bonding between iron powder particles obtained by heating in oxidizing atmospheres provides enhanced strength (see cols. 2-3, and Claim 1). Lefebvre teaches that the

particles are bonded to one another, meeting the limitation of directly bonded (see cols. 2-3, and Claim 1).

It would have been obvious to one skilled in the art at the time invention was made to use the compression molding and binder range disclosed in Kawato et al., in making the soft magnetic green compact of Hayashi et al. in order to make a magnet with excellent physical properties, as taught by Kawato (see cols. 12-14), and further to employ the oxidation bonding disclosed by Lefebvre ('729), in order to make a soft magnetic green compact that had oxidation bonding to provide enhanced strength compared to resin bonded compacts, as disclosed by Lefebvre ('729) (cited above).

Regarding the limitation wherein the resin powder is applied by the thermal treatment, the green compact produced by the method of Hayashi et al. in view of Kawato and Lefebvre would inherently have the same properties as the green compact as claimed. The similar composition processed similarly must inherently have the same properties. Applicant is further directed to MPEP 2112.01.

Regarding Claim 11, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim for the same reasons as stated above.

Neither Hayashi et al. nor Kawato et al. teach a soft magnetic green compact including an iron system powder with an insulation coating.

With regard to the limitation of iron powder with insulation coating, Lefebvre ('729) discloses that in a soft magnetic green compact, the iron powder particles may be insulated with a coating of oxide, that is bonded together to form a continuous coating (see cols. 2-3).

Regarding Claim 12, Hayashi et al. teaches the use of various resin materials, including a polyamide system resin (col. 7, line 13-22). Kawato et al. and Lefebvre ('729) are relied upon as described above. With regard to the limitation imposed that the binder powder be less than 200 μm, Hayashi et al. recommends that the particle size of recycled magnet material be ground to less than that size in order to process the material (see col. 7, lines 13-22).

It would have been obvious to one skilled in the art at the time invention was made to make a soft magnetic green compact with polyamide materials in resin binders as taught by Hayashi in order to enhance the strength and make the compact easier to handle, and to use polymer powder with particle size less than that of the magnetic powder in order to facilitate molding.

In regards to Claim 13, Hayashi et al. teaches the use of a resin with thermoplastic and thermosetting components (col. 7, lines 13-22). Kawato et al. and Lefebvre ('729) are relied upon as discussed in the previous rejections.

Hayashi is silent with regard to the melting point of the thermoplastic component of the resin.

Kawato et al. refers to the thermoplastic resin preferably having a melting point of at least 200° C (see col. 25 line 65-col. 26, line 19).

It would have been obvious to one skilled in the art at the time of invention to prepare a soft magnetic green compact with resin containing both thermoplastic and thermosetting components as taught by Hayashi in order to enhance strength and ease of manufacture.

Regarding Claim 14, Hayashi et al. teaches the use of various resin materials, including a polyphenylene sulfide system resin (col. 7, line 13-22). Kawato et al. and Lefebvre ('729) are relied upon as discussed in the previous rejections.

It would have been obvious to one skilled in the art at the time invention was made to prepare a soft magnetic green compact with polyphenylene sulfide as taught by Hayashi in order to provide enhanced strength and ease of manufacture.

Regarding Claim 15, Hayashi et al. and Kawato et al. are relied upon as discussed above.

Neither Hayashi et al. nor Kawato et al. teaches the heat treatment of soft magnetic green compacts in oxidizing ambient.

Lefebvre ('729) teaches heat treating soft magnetic green compacts in oxidizing ambient at temperatures falling within the range 100-450° C to encourage oxidization of the metal powder compacts in order to enhance strength (see col. 5, lines 4-17).

It would have been obvious to one skilled in the art at the time invention was made to heat treat a soft magnetic green compact with oxidizing atmosphere at temperature in the range of 100-450° C, as taught by Lefebvre ('729) in order to enhance the strength, as disclosed by Lefebvre ('729) cited above.

With respect to Claim 16, Hayashi et al. and Kawato et al. are relied upon as discussed above.

Neither Kawato et al. nor Hayashi et al. disclose soft magnetic green compacts with density in the range of 6.6-7.4 g/cm^3.

Lefebvre ('729) discloses soft magnetic green compacts strengthened with oxidation bonding that have density values that fall into the range of 6.6-7.4 g/cm^3 (see col. 6, Table 1).

It would have been obvious to one skilled in the art at the time invention was made to make a soft magnetic green compact with high relative density as taught by Lefebvre ('729) in order to enhance the strength.

Regarding Claim 18, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above.

In regards to Claim 19, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above.

Regarding Claim 20, Hayashi et al. and Kawato et al. are relied upon as discussed above.

Neither Hayashi et al. nor Kawato et al. teaches the heat treatment of soft magnetic green compacts in oxidizing ambient.

Lefebvre ('729) teaches heat treating soft magnetic green compacts in oxidizing ambient at temperatures less than 300° C to encourage oxidization of the metal powder compacts (see col. 5, lines 4-17).

It would have been obvious to one skilled in the art at the time invention was made to heat treat a soft magnetic green compact with oxidizing atmosphere at temperature in the range of 250-450° C in order to enhance the strength, as taught by Lefebvre ('729).

With respect to Claim 21, Hayashi et al. and Kawato et al.applied to the claim for the same reasons stated above.

Neither Hayashi et al. nor Kawato et al. teaches the heat treatment of soft magnetic green compacts in oxidizing ambient.

Lefebvre ('729) teaches heat treating soft magnetic green compacts made from iron powder particles with insulating coating in oxidizing ambient at temperatures less than 600° C to encourage oxidization bonding (see col. 5, lines 4-17).

It would have been obvious to one skilled in the art at the time invention was made to heat treat a soft magnetic green compact with oxidizing atmosphere at temperature in the range of 250-450° C in order to enhance the strength, as taught by Lefebvre ('729).

Regarding Claim 22, Hayashi et al. and Kawato et al. are relied upon as discussed above.

Neither Hayashi et al. nor Kawato et al. teaches the use of phosphoric acid to create an iron phosphate coating.

The use of phosphoric acid to form an insulating layer on the surface of iron powder is well known in the art. For example, Lefebvre ('729) discloses phosphatation of the iron powder to be made into a soft magnetic green compact (see col. 4, lines 38-39).

It would have been obvious to one skilled in the art at the time invention was made to treat iron powder with phosphoric acid and other chemicals to create a thin insulation film, as taught by Lefebvre ('729) and others, in order to protect the magnetic

properties of the iron powder to be used for a soft magnetic green compact, as shown in Lefebvre ('729), cited above.

Regarding Claim 23, Hayashi et al. and Kawato et al. and Lefebvre ('729) are applied to the claim as stated above.

It would have been obvious to one skilled in the art at the time invention was made to create a soft magnetic green compact with coated insulative layer and oxidation bonding in order to provide enhanced strength at high temperature as taught by Lefebvre ('729).

With respect to Claim 24, Hayashi et al. is relied upon as stated in previous paragraphs. Lefebvre ('729) is relied upon as stated above.

Hayashi does not disclose a composition of resin powder within the range of 0.10-3.00 weight percent.

Kawato et al. teaches the use of resin amounts that overlap the claimed range (see col. 7, lines 55-62).

It would have been obvious to one skilled in the art at the time of invention to create a soft magnetic green compact with resin binder falling within the range of 0.10-3.00 weight percent as taught by Kawato et al. in order to make a soft magnetic green compact stronger and easier to manufacture.

Regarding Claim 25, Hayashi et al., Kawato et al. and Lefebvre ('729) are applied to the claim for the reasons stated above.

It would have been obvious to one skilled in the art at the time of invention to create a soft magnetic green compact with resin binder falling within the range of 0.10-

3.00 weight percent as taught by Kawato et al. in order to make a soft magnetic green compact stronger and easier to manufacture.

Regarding claim 26, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above. Lefebvre ('729) further teaches that an oxide insulation coating is formed around the powder (see cols. 2-3).

Regarding claim 27, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above. Lefebvre ('729) further teaches that an oxide insulation coating is formed around the powder (see cols. 2-3).

Regarding claims 28 and 29, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above. Lefebvre ('729) further teaches that an oxide insulation coating is formed around the powder (see cols. 2-3). The absence of any binder particles between the oxide insulating layer and the iron containing powder particles would be an inherent property of the soft metallic green compact formed by oxidation bonding taught by Lefebvre ('729). Applicant is further directed to MPEP 2112.01.

Regarding claims 30 and 31, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above.

Regarding claims 32 and 33, Hayashi et al., Kawato et al., and Lefebvre ('729) are applied to the claim as stated above. Kawato et al. teaches to use less binder when using a compression molding technique than an injection technique, using binder in amounts of 0.1 to 5% when using compression molding (col. 7, lines 55-62), which thus would result in final binder amounts within the range as claimed by Applicant. Kawato

further teaches that the advantages of using compression molding include excellent physical properties (see cols. 12-14).

It would have been obvious to one of ordinary skill in the art at time of invention to have selected a resin amount in the range of from about 0.010-3.00 weight percent because Kawato teaches the same utility over the entire range. The use of such resin amounts would inherently result in a green compact with resin in amounts of 0.010-0.5 weight percent after processing in the manner described above (see MPEP 2112.01).

Regarding claims 34-43, the green compact produced by the method of Hayashi et al. in view of Kawato and Lefebvre would inherently have the same properties as the green compact as claimed. The similar composition processed similarly must inherently have the same properties. Applicant is further directed to MPEP 2112.01.

Regarding claims 44-53, the compact made from the teachings of Hayashi in view of Lefebvre ('729) would inherently have the properties resulting from increasing adhesiveness relative to the iron system powder since an essentially identical composition is processed essentially identically to the instant invention. Applicant is further directed to MPEP 2112.01.

Response to Arguments

11. Applicant's arguments filed 25 February 2008, with respect to the rejection under 35 USC 112 have been fully considered and are persuasive. The rejection of claims 30 and 31 has been withdrawn.

In particular, applicant argues that the thermal treatment does not add resin powder to the green compact, but merely applies the resin powder present after compaction (see pp. 16-17, for example). Upon further review, the examiner agrees that the powder is applied by the thermal treatment step (see Merriam-Webster). The term "is applied by the thermal treatment" is met by applicant's disclosure at paragraphs [0041], [0056] and [0057], which teach that the polyamide resin is melted during the treatment.

Applicant's arguments filed with respect to the rejections under 35 USC 103 have been fully considered but they are not persuasive. Applicant argues that the references do not teach wherein the resin powder is applied by the thermal treatment. However, this step would have been inherent in the process, as stated above.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER KESSLER whose telephone number is (571)272-6510. The examiner can normally be reached on Mon-Fri, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

/CSK/